Marine mammal and sea turtle strandings have been documented throughout history. In previous centuries, the stranding of a marine mammal was viewed as a source of food and supplies, and in some situations served as religious or spiritual symbolism for native communities. The past few decades have seen an emerging awareness of marine mammal and sea turtle stranding events and methods of rescue and prevention. Response to stranding events was initially performed for humane reasons, to rescue the animals and return them to the wild, and to ease their suffering. Traditionally, marine mammals and sea turtles are very hard to study, due to their extensive range in the open ocean. Oftentimes, we will know about their nesting, breeding and/or feeding habits, but usually not all of their life history. When a marine animal washes ashore, a good opportunity is presented to learn more about their life history. Over the past few decades, stranding response has evolved into a science that maximizes both the safety of the animal and the ecology of stranding.

In the 1970s, public awareness increased regarding the preservation of natural resources in the United States. Marine mammals and sea turtles were protected with the passage of 2 federal acts. The Marine Mammal Protection Act (MMPA) passed in 1972 put all Marine Mammals under the jurisdiction of the federal government. The agencies that were assigned oversight were NOAA Fisheries Service and US Fish and Wildlife Service. US Fish and Wildlife Service was given charge over Sirinenians (manatees), walruses and sea otters, and NOAA Fisheries Service was charged with protecting all other marine mammals. The MMPA prevented any live marine mammal from being harmed or harassed and any dead marine mammal from being harvested for parts. In 1973, the Endangered Species Act (ESA) was passed. The ESA mandated protection for species that are considered endangered or threatened in all or some portion of their range. The ESA offered much needed protection for sea turtles, as those that occur in US waters are listed as either endangered or threatened.
The ESA also offered further protection to the endangered and threatened species of marine mammals.

Currently, many of the organizations that respond to marine mammals also respond to sea turtles. However, the evolution of these 2 programs has occurred independently.

**Marine Mammals:**

According to both the MMPA and the ESA, harassment of protected species is forbidden. These Acts define harassment as any disruption to an animal’s natural behavior, be it sleeping, nursing, feeding or swimming. According to these definitions, responding to strandings can be considered a form of harassment. This necessitated the need for Federal Authorization to perform stranding response. The Marine Mammal Commission hosted the first Marine Mammal Stranding Workshop in 1977. The conference was attended by marine mammal biologists, many of which had been performing some manner of stranding response. Some organizations in the Northeast region began responding to stranded marine mammals in the early 1970s, predominantly the New England Aquarium and the Smithsonian Institution.

Under the MMPA, NOAA Fisheries Service was authorized to release Letters of Authorization (LOA) that authorized all aspects of marine mammal stranding response. LOAs were issued to the organizations already performing these activities. Within the Northeast, the New England Aquarium and the College of the Atlantic received LOAs from NOAA Fisheries Service. The goals of these Letters were twofold, to aid in marine mammal strandings, by easing the animals’ suffering and release back to the wild, if possible and to collect data on these strandings in order to learn more about these elusive animals.

It was during this workshop where the first regional stranding networks were discussed and developed under the direction of NOAA Fisheries Service. These networks would consist of the organizations that had already been responding to strandings within their area. These networks would be coordinated by the NOAA Fisheries Service on a regional and a national basis. The existence of these networks would facilitate better communication and data sharing between organizations and between regions. This basic framework would eventually lead to the development of standard stranding response and data collection.
After this meeting and throughout the 1980s, the Northeast regional stranding network continued to grow. During the mid 1980s there were 2 significant stranding events that brought national attention to stranded marine mammals. Between 1987 and 1988 there was a mass die off of approximately 750 bottlenose dolphins along the East coast of the United States. Many of these animals washed ashore dead. In 1987 during a five week period in late November, 14 humpback whales were found dead in and around Cape Cod Bay, MA. The investigation of these mortalities was coordinated by NOAA Fisheries Service. Post-mortem analysis indicated that all of these animals had consumed prey contaminated with brevetoxin or saxitoxin, a toxin commonly associated with Harmful Algal Blooms, known as shellfish poisoning in humans.

As a result of these events, it became obvious that there was limited baseline data on marine mammals to refer back to when investigating these mass mortality events. Results of the investigation also pointed to anthropogenic (human related) effects that had previously been poorly documented. Since marine mammals are commonly the top predator in the ocean environment, they can act as sentinel species and indicators of overall ocean health. This warranted further information to be collected regarding the life history, behavior and ecology of these animals. Strandings can be viewed as an opportunistic method of collecting this data.

In the early 1990s, a thorough review of the national stranding programs was conducted. The review prompted Congress to pass the Marine Mammal Health and Stranding Response Act (MMHSRA) in 1992. This Act formalized the Marine Mammal Health and Stranding Response Program (MMHSRP). The Program was charged with the objective of facilitating the collection and dissemination of reference data on stranded marine mammals and health trends of marine mammal populations in the wild. Since its inception, the MMHSRP has branched out into several different areas of marine mammal research.

The National Marine Mammal Stranding Network consists of several regional networks of which the Northeast region is only one. Having a national stranding network enables information to be shared more easily. The network currently consists of 6 different regions, representing the continental United States as well as Alaska and the Pacific Islands. All of these stranding networks represent decades of stranding response experience.
The Marine Mammal Unusual Mortality Event Program consists of a working group of people from academia, conservation organizations and/or Federal and State natural resource agencies. It is the decision of this group to determine when an Unusual Mortality Event (UME) is occurring or has occurred. A UME is generally defined when a group of marine mammals is dying in an unusual way, for instance high numbers, specific age classes or toxins. The 2 above examples discussed would have both been classified as UMEs.

The National Marine Mammal Tissue Bank (NMMTB) is an archive of selected Marine Mammal tissues. This functions through collaboration with the National Institute of Standards and Technology (NIST). Selected tissues are cryogenically frozen in order to provide a sample history of selected populations, facilitate future studied as they become developed and to ensure the stability of the sample.

Marine Mammal Disentanglement Network was initiated along the Eastern seaboard with affiliations with Canada in order to attempt to disentangle large whales, specifically Northern Right Whales and Humpback Whales from life-threatening entanglements.

In 2000, the Marine Mammal Rescue Assistance Act amended the MMPA to establish the John H. Prescott Assistance Grant Program. Prior to this grant program, all of the participants in the stranding network operated without any federal assistance. The inception of the Prescott Grant enabled the government to provide much needed funds to many of these not for profit organizations. These funds have been used by the various stranding network members to update their facilities, buy equipment, employ more staff and cover many of the other items associated with stranding response.

As each organization has become involved in the stranding network, they have maintained there own records on stranding response. NOAA Fisheries Service has required basic stranding response data, often referred to as Level A data. Prior to 2004, this data was hand written and submitted to the regional offices where the data was entered into a regional database. In 2004, in an effort to centralize, a national database was developed. Once the database was validated, entry of the Level A data was allocated to the stranding network participants. The evolution of this process has created the availability of data real-time. Currently, the data is available to the public via a request to the regional stranding coordinator. However, efforts are under way to validate the historical data in order to make some data freely available to the public.
Sea Turtles:

Surveying, documenting, and responding to sick, injured, entangled and dead sea turtles have been going on for well over 30 years. As a parallel process to the initiation of a formal Marine Mammal Stranding Network, the Sea Turtle Stranding and Salvage Network (STSSN) was also created. The STSSN was formally established in 1980 to collect information on, and document strandings of marine turtles along the U.S. Gulf of Mexico and Atlantic coasts. The network encompasses the coastal areas of the eighteen state regions from Maine through Texas, and includes portions of the U.S. Caribbean. Data from sea turtle strandings are compiled through the efforts of network participants who document marine turtle strandings in their respective areas and contribute those data to the centralized STSSN database, which is housed at the NOAA Fisheries Service Southeast Fisheries Science Center.

The STSSN was established in response to the need to better understand threats to sea turtles in the marine environment and to provide aid to stranded sea turtles, or dispose of a dead endangered sea turtle, or salvage a dead endangered sea turtle that may be useful for scientific and educational purposes. Maintaining a stranding network is identified as a recovery task in all federal sea turtle recovery plans. The extensive training requirements, comprehensive data collection, and frequent review and evaluation of these programs, satisfy the requirements described for individual directed research permits. Actions taken by stranding and entanglement networks improve survivability of sick, injured, entangled or stranded turtles and improve our knowledge about population structure, the etiology of disease, environmental stressors and manmade threats in the marine environment.

More recently, the NER has spearheaded efforts to develop a Sea Turtle Disentanglement Network (STDN) to address marine turtle entanglement and mortality in pot gear fisheries.

Throughout the development of the MMHSRP and the STSSN, the Northeast Regional network has grown from a few individuals to a collaboration of 19 organizations consisting of state agencies, aquaria, universities and non-profit organizations that perform all or some of the activities associated with responding to stranded or entangled marine mammals and sea turtles.